REMARKS

I. General

Claims 1-29 are pending, and claims 1, 14, 15, 28, and 29 are rejected by the Office Action mailed October 3, 2005. Claim 10 is amended by this response. The issues in the current Office Action are as follows:

- Claims 1, 14, 15, 28, and 29 are rejected under 35 U.S.C. §103(a) over US 5,291,560 (hereinafter, *Daugman*) in view of Nichols, ed., ICSA Guide to Cryptography, McGraw-Hill, 1999, at Ch. 22 (hereinafter, *Soutar*).

- Claims 2-13 and 16-27 are objected to.

Applicant hereby traverses the rejections and requests reconsideration and withdrawal in light of the remarks contained herein.

II. Claim Amendments

Claim 10 is amended to delete one occurrence of "using a selection." This amendment merely corrects a typographical error; thus, no new matter is added. Further, this amendment is not in response to any art, nor does it narrow the scope of the claim.

III. Claim Objections

Claims 2-13 and 16-27 are objected to for depending from rejected base claims, but are otherwise indicated as allowable. Applicant thanks the Examiner for this indication of allowable subject matter and respectfully asserts that the rejected base claims are also allowable, as shown below.

IV. Claim Rejections

On pages 2-7, the Office Action rejects claims 1, 14, 15, 28, and 29 are rejected under 35 U.S.C. §103(a) over *Daugman* in view of *Soutar*. Applicant traverses the rejection.

To show obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the

knowledge generally available to one of ordinary skill in the art, to modify the applied reference. Second, there must be a reasonable expectation of success. Finally, the applied reference must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143. Without conceding the second criterion, Applicant respectfully asserts that the rejection does not satisfy the first and third criteria, as discussed further below.

A. Lack of Motivation to Combine

The Office Action fails to provide the requisite motivation to combine *Daugman* with *Soutar*. It is well settled that the fact that references can be combined or modified is not sufficient to establish a *prima facie* case of obviousness, M.P.E.P. § 2143.01. On page 6 of the Office Action, the rejection states:

> Dougman does not specifically use the word "characteristics" and "query feature vectors" but in view of the very well known facts, as also described by *Soutar*, as discussed before, it would have been obvious for one of ordinary skill in the art at the time of invention was made to use such biometric descriptors as defined with concentrating on the same subject.

The statement above asserts that it would be obvious to make the combination because various subject matter is well known and also because of concentration by each reference on overlapping subject matter. However, neither knowledge of subject matter nor overlapping of subject matter suggests any desirability for such a combination. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combinations, M.P.E.P. § 2143.01 citing *In re Mills*, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990). Thus, the failure to provide motivation suggesting desirability of the combination is improper. Accordingly, Applicant respectfully submits that the 35 U.S.C. § 103(a) rejection of claims 1, 14, 15, 28, and 29 fails.

B. Failure to Teach or Suggest All Claim Limitations

Claim 1 recites, in part, "a target biometric sample is a potential match to said query biometric sample when a threshold number of features in the target feature vector ... are identical to features in said query feature vector." The combination of *Daugman* and *Soutar* does not teach or suggest at least this feature of claim 1. The Office Action cites the following passages of *Daugman* to teach or suggest the feature: figure 5, column 3, lines 10-

20, column 12, line 54 through column 13, line 20, column 15, lines 29-38 and column 4, lines 65-68.

The cited passages do not teach or suggest the above-recited feature of claim 1 because they do not teach or suggest a threshold number of features. For instance, the cited passages together teach that the *Daugman* system saves information as a series of bits in "iris code vectors." Col. 3, lines 1-36. The vectors are compared using XOR logic followed by computing norms of the resulting vectors. *Id.* The mismatches between individual binary bits in a pair of compared vectors leads to a Hamming distance calculation that can be used to provide a yes/no decision and a confidence level for the decision. *Id.* In other words, the *Daugman* system compares individual bits in a given iris code vector to bits in another vector and uses each mismatch in those bits for further calculations. *Id.* at Col. 12, line 54 through Col. 13, line 20. However, mismatches between individual bits do not teach or suggest "a threshold number of features," as recited in the claim, because individual bits, without more, do not teach or suggest features. Thus, *Daugman* does not teach or suggest the feature. Further, the Office Action does not rely on *Soutar* to teach or suggest the feature. Accordingly, the combination of *Daugman* and *Soutar* does not teach or suggest each and feature of claim 1.

Claim 15 recites, in part, "a target biometric sample is a potential match to said query biometric sample when a threshold number of features in the target feature vector ... are identical to features in said query feature vector." The combination of *Daugman* and *Soutar* does not teach or suggest at least this feature of claim 15. Specifically, the Office Action relies on *Daugman* to teach the feature; however, the cited passages from *Daugman* do not teach or suggest the above-recited feature of claim 15 because they do not teach or suggest a threshold number of features. For instance, the cited passages together teach that the *Daugman* system compares individual bits in a given iris code vector to bits in another vector and uses each mismatch in those bits for further calculations. *Daugman* at Col. 12, line 54 through Col. 13, line 20. However, mismatches between individual bits do not teach or suggest "a threshold number of features," as recited in the claim, because individual bits, without more, do not teach or suggest features. Thus, *Daugman* does not teach or suggest the feature. Further, the Office Action does not rely on *Soutar* to teach or suggest the feature. Accordingly, the combination of *Daugman* and *Soutar* do not teach or suggest each and feature of claim 15.

Claim 29 recites, in part, "a target biometric sample is a potential match to said query biometric sample when a threshold number of features in the target feature vector .... are identical to features in said query feature vector." The combination of *Daugman* and *Soutar* does not teach or suggest at least this feature of claim 29. The Office Action relies on *Daugman* to teach the feature. However, the cited passages from *Daugman* do not teach or suggest the above-recited feature of claim 29 because they do not teach or suggest a threshold number of features. For instance, the cited passages together teach that the *Daugman* system compares individual bits in a given iris code vector to bits in another vector and uses each mismatch in those bits for further calculations. *Daugman* at Col. 12, line 54 through Col. 13, line 20. However, mismatches between individual bits do not teach or suggest "a threshold number of features," as recited in the claim, because individual bits, without more, do not teach or suggest features. Thus, *Daugman* does not teach or suggest the feature. Further, the Office Action does not rely on *Soutar* to teach or suggest the feature. Accordingly, the combination of *Daugman* and *Soutar* do not teach or suggest each and feature of claim 29.

Dependent claims 14 and 28 each depend either directly or indirectly from respective independent claims 1 and 15 and, thus, inherit all of the limitations of their respective independent claims. Thus, the cited combination does not teach or suggest all claim limitations of claims 14 and 28. It is respectfully submitted that dependent claims 14 and 28 are allowable at least because of their dependence from their respective base claims for the reasons discussed above. Accordingly, withdrawal of the 35 U.S.C. §103(a) rejection of claims 1, 14, 15, 28, and 29 is respectfully requested.

Further, the dependent claims include limitations that cause them to be patentable in their own right. For instance, claims 14 and 15 recite, in part, "incrementing the count of matching features for each located target feature identification." The Office Action cites *Daugman* at figure 12 and the passages at column 16, line 25, through column 17, line 39, to teach or suggest the above-quoted features. The cited portions teach error rates in the *Daugman* system, but do not teach or suggest a count of matching features. *Daugman* does not teach or suggest a count of matching features at least because it does not count matching features. Instead, the *Daugman* system tallies the number of mismatches between individual bits in iris codes. *Daugman* at Col. 13, lines 8-20. However, mismatches between individual bits do not teach or suggest "a count of matching features," as recited in the claims, because individual bits, without more, do not teach or suggest features. Thus, *Daugman* does not

teach or suggest the features. Further, the Office Action does not rely on *Soutar* to teach or suggest the recited features of claims 14 and 15. Accordingly, the cited combination does not teach or suggest the above-quoted features of claims 14 and 15.

V. Conclusion

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 08-2025, under Order No. 200301992-1 from which the undersigned is authorized to draw.

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV482723834US, in an envelope addressed to: MS Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Date of Deposit: January 3, 2006

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